

ABSTRACT

Prior to data transmission, a protocol for performing mutual authentication and sharing a plurality of encryption keys is executed between a CPU 12 on the side of a data transmission apparatus 10 and a CPU 22 on the side of a data receiving apparatus 20. The data transmission apparatus 10 causes the CPU 12 to encrypt data requiring the assurance of a transmission band by a first encryption key and to transmit the data in a first transmission mode via an input/output interface 16, and also to encrypt related data relating to the data by a second encryption key and to transmit the related data in a second transmission mode via the input/output interface 16. The data receiving apparatus 20 causes the CPU 22 to decode, by a first encryption key, the data requiring the assurance of a transmission band received in the first transmission mode via an input/output interface 24, and also to decode, by a second encryption key, the related data received in the second transmission mode via the input/output interface 24.